

Fate Report for Case # P-18-0100

Fate

Summary Statement

Fate P-18-0100

Summary

Statement: FATE: [REDACTED]

Solid

S = Disp.

VP < 1.0E-6 torr at 25 °C (E)

BP > 400 °C (E)

H < 1.00E-8 (E)

POTW removal (%) = 90 via sorption

Time

for complete ultimate aerobic biodeg > mo

Sorption to

soils/sediments = v.strong

PBT Potential: P3B1

*CEB FATE:

Migration to ground water = negl

PMN Material:

Overall

wastewater treatment removal is 90% via sorption.

Sorption to sludge

is strong based on high molecular volume.

Air Stripping

(Volatilization to air) is negligible based on high molecular volume.

Removal by biodegradation in wastewater treatment is negligible based on high molecular volume.

The aerobic aquatic biodegradation

half-life is greater than months based on high molecular volume.

The anaerobic aquatic biodegradation half-life is greater than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is greater than or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is

very strong based on high molecular volume.

Migration to

groundwater is negligible based on high molecular volume.

PMN

Material:

High Persistence (P3) is based on the estimated anaerobic biodegradation half-life.

Low Bioaccumulation potential (B1) is based on high molecular volume.

Bioconcentration/Bioaccumulation factor to be put into E-Fast: N/A

Fate Lee, WenHsiung

Assessor:

SMILES:

Physical Properties

Property	Measured/Calculated Value	EPI
Molecular Form:		
Molecular Wt.:		
% < 500:		
%		
< 1000:		

Property	Measured Value	Method	Estimated Value	Method	EPI
Melting Point:					
Boiling Point:			>400	Polymer	
BP			@760		@760
Pressure:					
Vapor			<0.000001	Polymer	
Pressure:					
Water			Dispersible	Structure	
Solubility:					
Log P:					
Log					
Kow:					
Log Koc:					
Log BCF:					
Henry's					
Law:					

Property	Measured Value	Method	Estimated Value	Method	EPI
----------	----------------	--------	-----------------	--------	-----

<p>pH:</p> <p>pH</p> <p>Comment:</p>

Fate Analysis

Hydrolysis (t1/2, da):	Volatilization (t1/2)	Volatilization (t1/2)
	- River (hr):	- Lake (da):
Atm Ox Potential (t1/2)OH (hr):	Atm Ox Potential (t1/2)O3 (hr):	Atm Ox Potential (t1/2) Total (hr):
MITI Linear:	MITI NonLinear:	
Biodeg Linear:	Biodeg NonLinear:	
Biodeg Survey ult:	Biodeg Survey Prim:	
STP (% removal) Total:	STP (% removal) Biodeg:	
STP (% removal) Ads:	STP (% removal) Air:	

Rationales

<p>Removal in Wastewater Treatment:</p> <p>Atmospheric Oxidation:</p> <p>Hydrolysis:</p> <p>Photolysis:</p> <p>Aerobic Biodegradation:</p> <p>Anaerobic Biodegradation:</p> <p>Sorption to Soil and Sediment:</p> <p>Migration to Groundwater:</p> <p>Persistence - Air:</p>
--

Persistence - Water: Volatilization from Water: Soil: Sediment: Other: Standard: Bioaccumulation:
--

PBT Ratings

Persistence	Bioaccumulation	Toxicity	PBT Comments
3	1	2	

Exposure-Based Testing

Exposure-Based Testing:
--

Fate Ratings

Removal in WWT/POTW

(Overall):

Removal in 90 WWT/POTW (Overall):
--

Condition	Rating Values	Rating Description				Comment
		1	2	3	4	
WWT/POTW Sorption:	3	Low	Moderate	Strong	V. Strong	
WWT/POTW Stripping:	4	Extensive	Moderate	Low	Negligible	
Biodegradation Removal:	4	Unknown	High	Moderate	Negligible	
Biodegradation Destruction:		Unknown	Complete	Partial	—	
Aerobic Biodeg Ult:	4	<= Days	Weeks	Months	> Months	
Aerobic Biodeg Prim:		<= Days	Weeks	Months	> Months	
	4	<= Days	Weeks	Months		

Condition	Rating Values	Rating Description				Comment
		1	2	3	4	
Anaerobic Biodeg Ult:					> Months	
Anaerobic Biodeg Prim:		<= Days	Weeks	Months	> Months	
Hydrolysis (t1/2 at pH 7,25C) A:		<= Minutes	Hours	Days	>= Months	
Hydrolysis (t1/2 at pH 7,25C) B:		<= Minutes	Hours	Days	>= Months	
Sorption to Soils/Sediments:	1	V. Strong	Strong	Moderate	Low	
Migration to Ground Water:	1	Negligible	Slow	Moderate	Rapid	
Photolysis A, Direct:		Negligible	Slow	Moderate	Rapid	
Photolysis B, Indirect:		Negligible	Slow	Moderate	Rapid	
Atmospheric Ox A, OH:		Negligible	Slow	Moderate	Rapid	
Atmospheric Ox B, O3:		Negligible	Slow	Moderate	Rapid	

Bio**Comments:**

Bio Comments:

Fate**Comments:**

<p>Fate PMN Material:</p> <p>Comments: Overall wastewater treatment removal is 90% via sorption. Sorption to sludge is strong based on high molecular volume. Air Stripping (Volatilization to air) is negligible based on high molecular volume.</p> <p>Removal by biodegradation in wastewater treatment is negligible based on high molecular volume.</p>
--

The aerobic aquatic biodegradation half-life is greater than months based on high molecular volume.

The anaerobic aquatic biodegradation half-life is greater than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is greater than or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is very strong based on high molecular volume.

Migration to groundwater is negligible based on high molecular volume.

PMN

Material:

High Persistence (P3) is based on the estimated anaerobic biodegradation half-life.

Low Bioaccumulation potential (B1) is based on high molecular volume.

Bioconcentration/Bioaccumulation factor to be put into E-Fast: N/A

Comments/Telephone Log

Artifact	Update/Upload Time
[REDACTED]	[REDACTED]